Improving Uncontrolled Hypertension Rates in the Buccaneer Module at Vidant’s Family Medical Center

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BACKGROUND

Hypertension is a leading cause of death in the United States. According to the CDC, 1/3 adults have hypertension, and only about half (54%) have this blood pressure under control. At Vidant’s Family Medical Center in Greenville, NC, uncontrolled hypertension is a pressing issue that needs to be addressed. Specifically, in the Buccaneer Module, which has 43.15% (per JNC 7) or 36% (per JNC 8) uncontrolled hypertension rates – the highest of all the modules in the center. In this study, these patients with uncontrolled hypertension were followed to track their blood pressure control and then an intervention was done with a subset population to see if this issue could be improved.

PROJECT AIM

The specific aim of the study is to improve the rates of uncontrolled hypertension in the Buccaneer module at Vidant’s Family Medical Center.

PROJECT DESIGN/STRATEGY

All of the patients with uncontrolled hypertension rates per JNC 7 in the Buccaneer Module of the Family Medicine Center were gathered and then were filtered so that only patients with uncontrolled hypertension per JNC 8 were represented. A statistically significant number of charts have been selected randomly and these patients’ charts have been reviewed and followed throughout a 12-month period and factors such as Department visits, PCP visits. Patients that had uncontrolled blood pressure without improvement were identified, and the patients on 3 or more blood pressure medications for control were recognized to set-up a follow-up appointment to discuss possible reasons to poor control and improve their medication regime.

RESULTS/OUTCOMES

The Buccaneer module had 1189 patients, of which 513 (43.15%) were said to have uncontrolled hypertension per JNC 7 criteria, and 428 (36.00%) were said to have uncontrolled hypertension per JNC 8 criteria. Of the 428 patients with uncontrolled hypertension, 31.4% of patients greater than or equal 60 years old were uncontrolled and 40.5% that are less than 60 years old were uncontrolled. After choosing a statistically significant number of 60 patients from this population, 8.3% of the patients (5 patients) from the sample were on 3 or more blood pressure medications.

Uncontrolled hypertension is a significant issue leading to a lower quality of living for the patients that are affected by it. These patients with uncontrolled hypertension may have many different contributing factors that are leading to them not being able to resolve or lessen the issue. These factors could be compliance, transportation, lack of access to care, etc. Although uncontrolled hypertension is multifactorial, finding a common and significant cause in the certain population that has this issue in the Buccaneer Module at the Family Medicine Center could help decrease the rates of uncontrolled hypertension.

CHANGES MADE (PDSA CYCLES)

PDSA 1

Plan:
Identify the patients that have uncontrolled HTN under JNC 8 criteria.

Do:
Changes the BP criteria from JNC 8 to JNC 7 criteria. Identify patients with JCCR or diabetes.

Study:
The population of patients with HTN under JNC 7 criteria were 26% be expected since JCCR criteria were lower than JNC 7.

Act:
In the next cycle a subset of patients will be followed to track their BP control over a year span.

PDSA 2

Plan:
Identify and follow a subset population of patients over a 1 year span.

Do:
60 patients were identified and followed for 1 year span for BP, EUCR, PCP visits, and medications.

Study:
The population did not allow any gaging variables explaining the uncontrolled in HTN.

Act:
In the next cycle the patients with 3 or more HTN medications will be followed to schedule follow-up.

PDSA 3

Plan:
The patients with 3 or more HTN medications will be identified and scheduled for follow-up.

Do:
5 patients on 3 or more HTN medications were identified and called to schedule follow-up.

Study:
The patients either did not respond or dropped out for their HTN.

Act:
Identify other variables that may contribute to uncontrolled HTN.

LESSONS LEARNED

Uncontrolled hypertension is a significant issue leading to a lower quality of living for the patients that are affected by it. These patients with uncontrolled hypertension may have many different contributing factors that are leading to them not being able to resolve or lessen the issue. These factors could be compliance, transportation, lack of access to care, etc. Although uncontrolled hypertension is multifactorial, finding a common and significant cause in the certain population that has this issue in the Buccaneer Module at the Family Medicine Center could help decrease the rates of uncontrolled hypertension.

NEXT STEPS

• Identify other variables that may affect blood pressure control.
• Possibly track which patients have made follow-up appointments and see if any improvements have been made, or if the patient was educated about the implications of blood pressure control.
• Make and distribute brochures about the benefits versus risks in controlled versus uncontrolled hypertension and with advice on how to improve control.
• Set-up a session with the patients with uncontrolled hypertension and a nutritionist to help in adjusting a variable in their diets to begin a healthier lifestyle.

ACKNOWLEDGMENTS

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Table:

<table>
<thead>
<tr>
<th>Patient group</th>
<th>JNC 7</th>
<th>JNC 8</th>
<th>2013 ACC/AHA</th>
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<tr>
<td>General</td>
<td>&lt;140/90 mm Hg</td>
<td>&lt;150/90 mm Hg</td>
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<tr>
<td>Other patients</td>
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<td>Chronic kidney disease</td>
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<td>&lt;130/80 mm Hg</td>
<td>&lt;130/80 mm Hg</td>
</tr>
</tbody>
</table>

*Includes patients with white systolic cardiovascular disease (WCCD) or an estimated 15-year risk ≥10%, as well as patients needing primary prevention or those with target ACC/AHA. 
*General population 45 years of age, treatment does not need to be adjusted in patients 65 years or those who may have lower systolic BP ≥140 mm Hg or mean arterial pressure ≥90 mm Hg.